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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/653,169

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Hiroshi Sakamoto

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06/05/2002

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EXAMINER

FISCHMANN, BRYAN R

ART UNIT

PAPER NUMBER

3618

DATE MAILED: 06/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/653,169

Applicant(s)
SAKAMOTO, ET AL

Examiner
Bryan Fischmann

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Apr 24, 2002
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirements.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on Apr 24, 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11 6) ☐ Other:

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Acknowledgments

1. The Drawing Corrections (paper 10) and Amendment (paper 13) filed 4-24-02 have been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 2, 5 and 8-11 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Claim 1, as amended, recites "...a clutch provided on an input shaft or an output shaft of said gear change apparatus in order to change a torque transmission course...".

The clutch on the input shaft is best understood to be reference number 3. The clutch on the output shaft is best understood to be reference numbers 14 or 17.

As best understood, the "change in a torque transmission course" is the different paths of the "dashed line" in Figures 2-4.

As best understood from Figures 2-4, this change in transmission course would only be affected by the clutches on the output shaft (14 and 17) , but not the clutch on the input shaft, as

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recited above. Stated another way, it does not appear that the clutch on the input shaft alone could change the course of the torque transmission, as illustrated on Figures 2-4.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Petersen, et al, US Patent 6,251,042.

Petersen teaches a power transmission apparatus of motor vehicles, comprising:

an engine (12);

a gear change apparatus (14) provided between said engine and a vehicle drive shaft (60 or 62);

an electric rotary machine (16) connected to an output shaft (Fig. 1) of said engine and said vehicle drive shaft via said gear change apparatus (Figure 1); and

a clutch (44, 46, 48 or 50) provided on an input shaft (not selected) or an output shaft (selected) of said gear change apparatus in order to change a torque transmission course, and by

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which a gear change operation is carried out to adjust a transmission torque between said input shaft and said output shaft (lines 24-27 of column 2).

Regarding claim 2, reference number 50 is selected to be the clutch (see lines 12-14 of column 3).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peterson, et al, US Patent 6,251,042, in view of Park, US Patent 5,701,984.

Peterson describes reference numbers 44, 46, 48 and 50 as synchronizers. Lines 24-26 of column 2 of Peterson recites "Each ratio gear 36, 38, 40 and 42 is selectively drivingly connectable with the main shaft 34 by respective synchronizers 44, 46, 48 and 50". From this, the synchronizers must be, or "comprise" clutches. It is best understood that the term "synchronizers" is associated with a "spline", or "dog clutch" type engagement, but this is not explicitly stated by Peterson.

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However, Park teaches that a "synchronizer" used in an automobile transmission comprises a "dog clutch" (Figure 1). A dog clutch is a necessary part of a "synchronizer" in that the dog clutch allows the mating of the synchronizer hub and the gear which is desired to be engaged so torque may be transmitted.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a dog clutch in the clutch, or synchronizer of Peterson, as taught by Park.

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peterson, et al, US Patent 6,251,042 and Park, US Patent 5,701,984, as applied to claim 1, and further in view of Tabata, et al, US Patent 5,873,426.

The combination power transmission apparatus of Peterson fails to teach the clutch is a multi-plate clutch. The combination power transmission apparatus of Peterson instead teaches the clutch is a dog-type clutch.

However, there are only a very few different types of clutches. One of them is the dog-type clutch and another is a multi-plate clutch. Tabata provides a teaching of a multi-plate clutch (CE_1 or CE_2) in a hybrid-type vehicle. A multi-plate type clutch is advantageous in that it is hydraulically activated, which facilitates integration into a control system.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a multi-plate type clutch in lieu of the dog clutch in the combination power transmission apparatus of Peterson, as taught by Park.

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Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1-11 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 of U.S. Patent No. 6,341,541. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are substantially identical. For example, the main difference in claim 1 of the Instant Application "versus" claim 1 of US Patent 6,341,541, is the limitation of a clutch placed between

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an input and output shaft of a gear box to control a transfer of torque as recited in claim 1 of US 6,341,541 “versus” the limitation of a clutch on an input or output shaft of a gear change apparatus in order to change a torque transmission course as recited in amended claim 1 of the Instant Application. However, a comparison of the wording of these two limitations is not actually viewed as a “difference”, as the function of changing a torque transmission course as recited in claim 1 of the Instant Application is inherently performed by claim 1 of US Patent 6,341,541, since the clutch of claim 1 of US Patent 6,341,541, in order to control a transfer of torque will cause a torque transmission course to change by engaging and disengaging.

Also note similar strong similarities between all other independent and dependant claims between the Instant Application and US Patent 6,341,541.

Response to Applicant's Remarks (paper 13) and Examiner's Comments

11. The Drawing Corrections (paper 10) and Amendment (paper 13) resolved all specification, drawing and claim objections, as well as the 112 rejections made on the first Office Action.
12. Applicant's arguments with respect to the 102 and 103 rejections made on the first Office Action in the “Remarks” section of the amendment have been considered, but are moot in view of the new grounds of rejection made in this Office Action which was necessitated by amendment to the claims for claim 1 and claims depending from claim 1.

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Conclusion

13. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- A) Helling - teaches power transmission apparatus for a hybrid vehicle
- B) Kawakatsu - teaches control apparatus of hybrid vehicle
- C) Sherman - teaches power transmission apparatus for a hybrid vehicle
- D) Morisawa - teaches power transmission apparatus for a hybrid vehicle
- E) Hoshiya, et al - teaches power transmission apparatus for a hybrid vehicle

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- F) Bullock - teaches arrangement of hybrid propulsion system
- G) Bader - teaches power transmission apparatus for a hybrid vehicle
- H) Sakamoto, et al - related patent by Applicant
- I) Japanese Patent 2000-301959 - related patent by Applicant

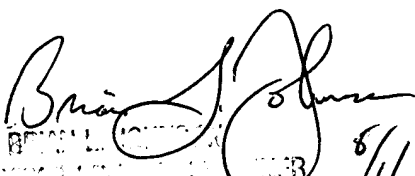
15. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Bryan Fischmann whose telephone number is (703) 306-5955. The examiner can normally be reached on Monday through Friday from 7:30 to 4:00.

If attempts to reach the Examiner by telephone are unsuccessful, the examiner's supervisor, Brian Johnson, can be reached on (703) 308-0885. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

BF

05/24/02


SUPERVISOR
TECHNICAL CENTER
6/1/02